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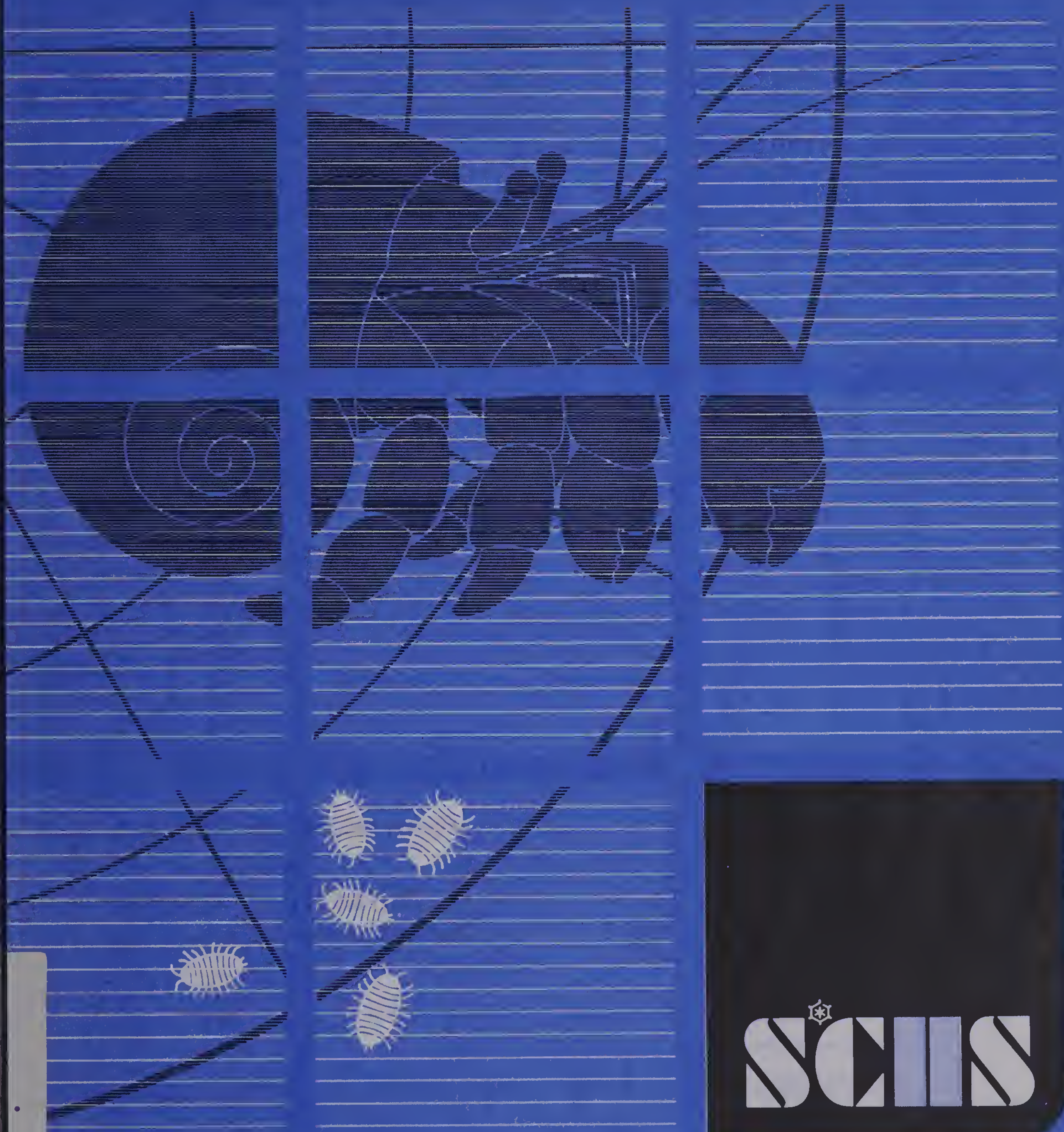

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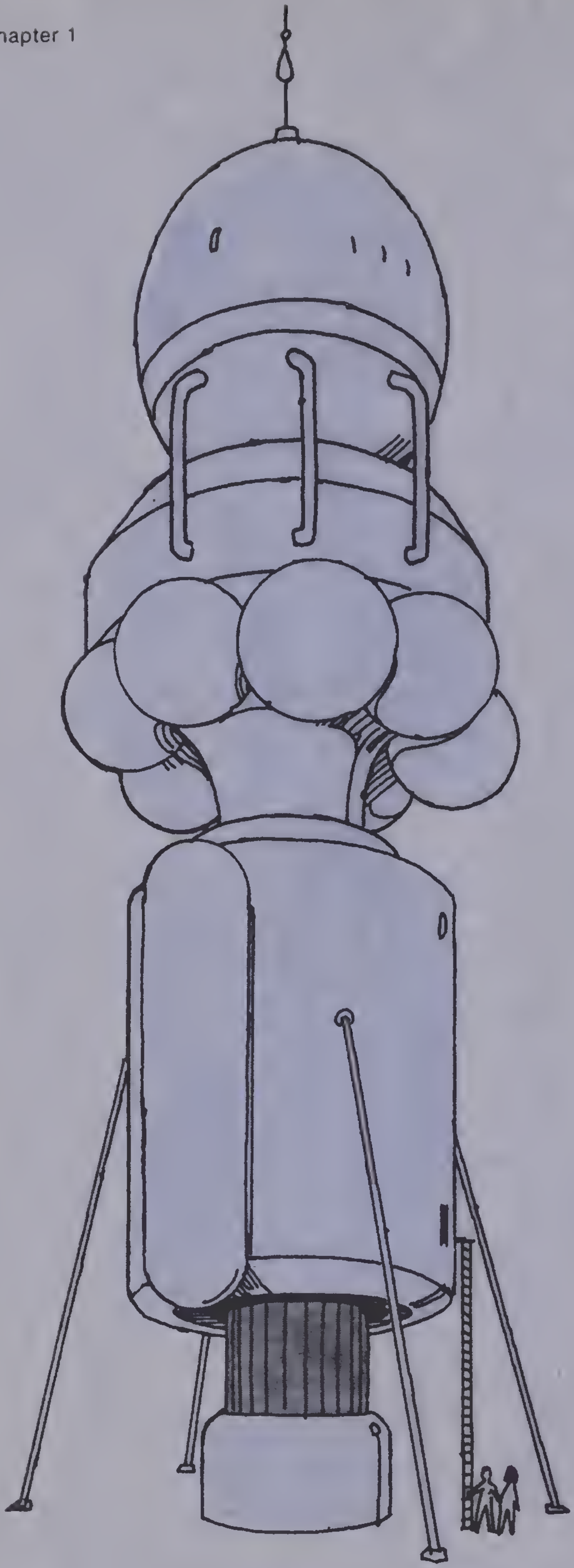

Imagine that you and some friends traveled to another planet. Suppose the climate was like that on Earth. Could you live there? What plants and animals would you need?

Think of some food chains and webs you would need. Draw or list the organisms.

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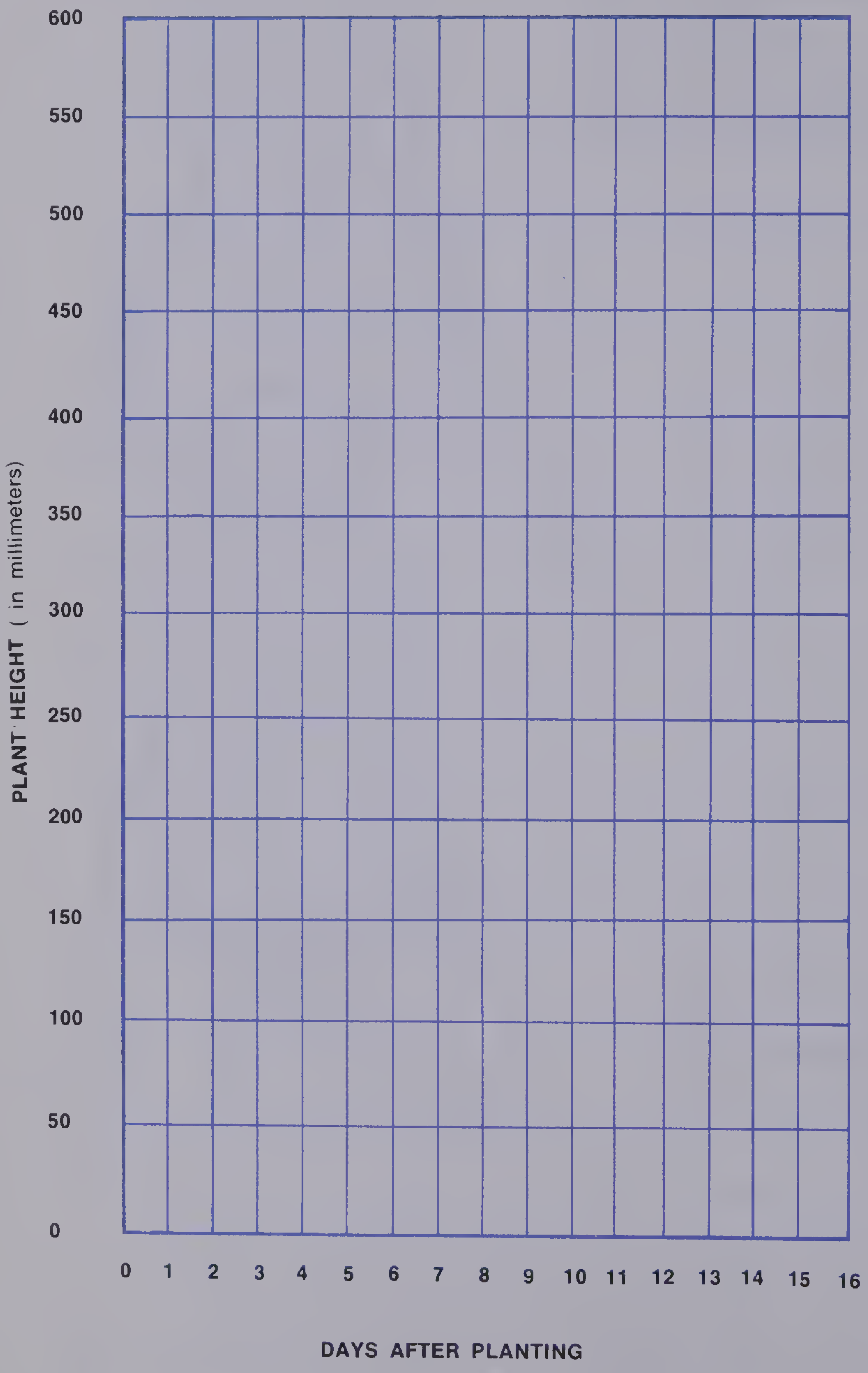
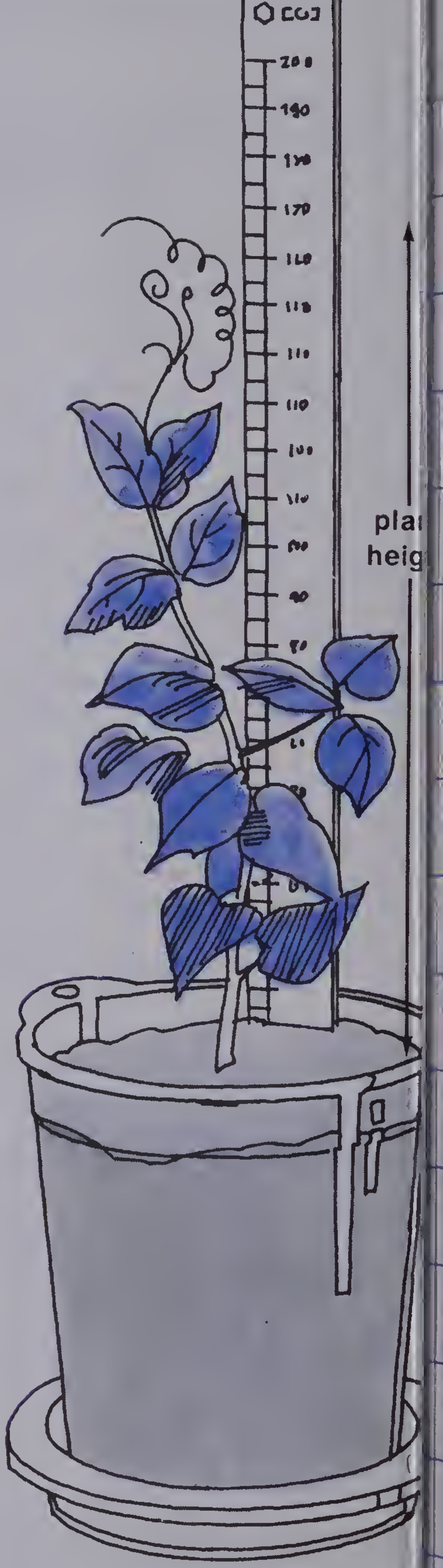
hat will you do to help your bean
ant become the tallest?

Each day, measure from the soil to the top.
Place an X on the graph to show the height each day.





NVIRONMENTAL FACTORS

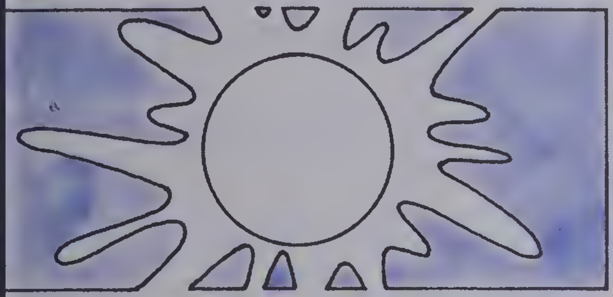
otic Factors	Abiotic Factors

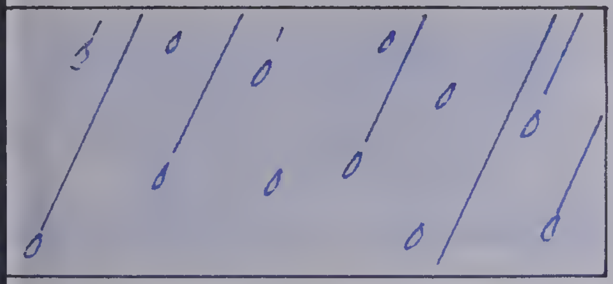
I plan to change the environment of ____________________ by
(name of organism)

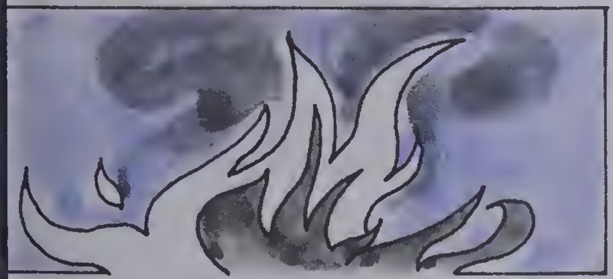
When I changed the environment of ____________________ , it

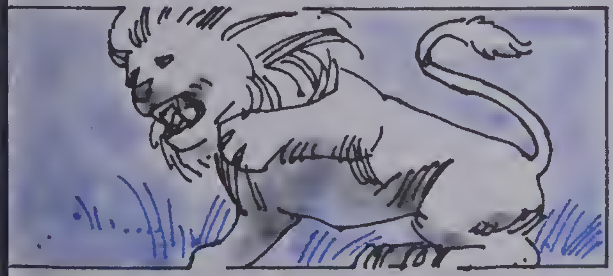
Match the pictures of environmental changes and organism responses. Draw lines between them.
A change may bring about more than one response.
Or, two changes can bring about the same response.

ENVIRONMENTAL CHANGES

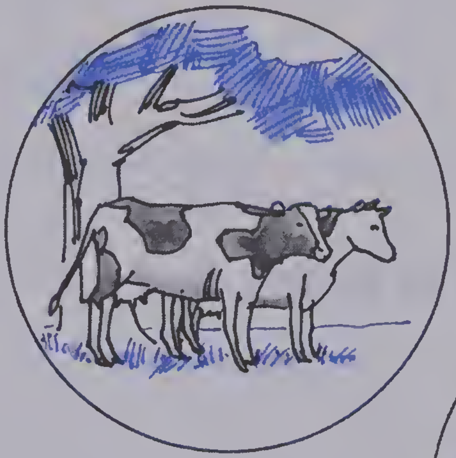


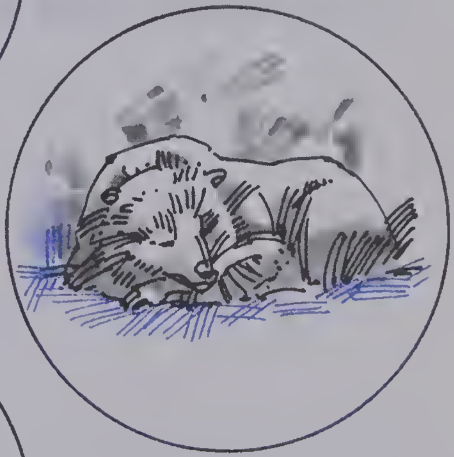


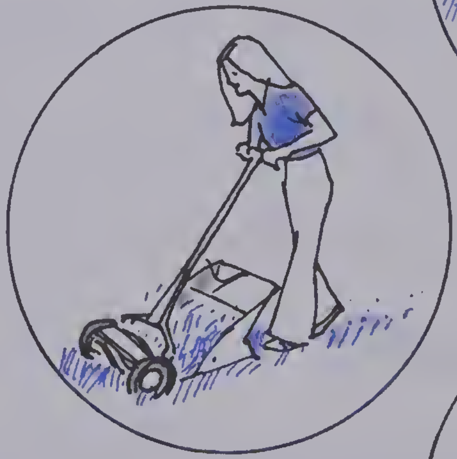


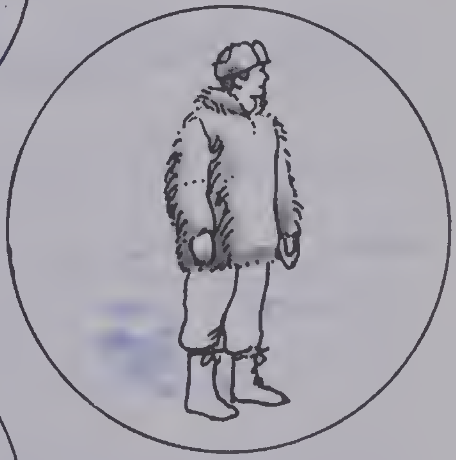


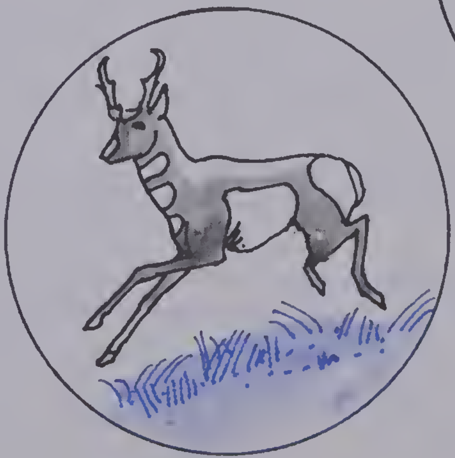
ORGANISM RESPONSES











Name ______________________ Date ______________

MY FIELD TRIP PLAN

I may see these plants and animals:

____

____

____

What changes may be starting now?

____

____

____

____

____

I will need this equipment:

____

____

____

____

____

____

ELD TRIP 1

Date ______________________

FIELD TRIP 2

Date ______________________

Date ____________________

ook at your notes on pages 9 and 10.
the chart below, list some organisms you saw.
rite down any changes in them.
hat factors do you think caused the changes?

Organisms	How did the organisms change?		Environmental factors
	1st Trip	2nd Trip	

Measure the heights of your plants. Record the measurements.
Use a different color for each kind of plant.

Color Key

○

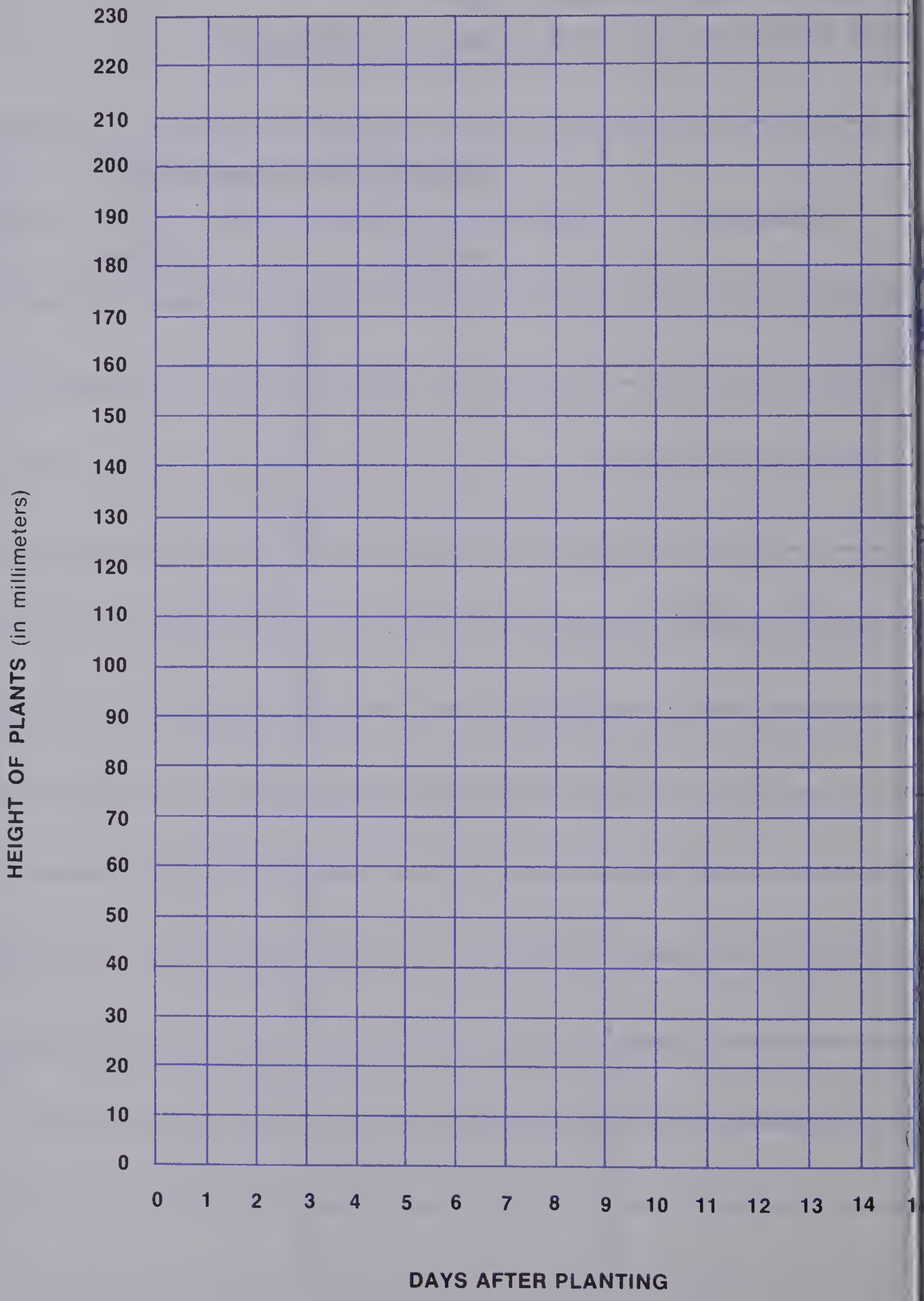
sunflower

○

tomato

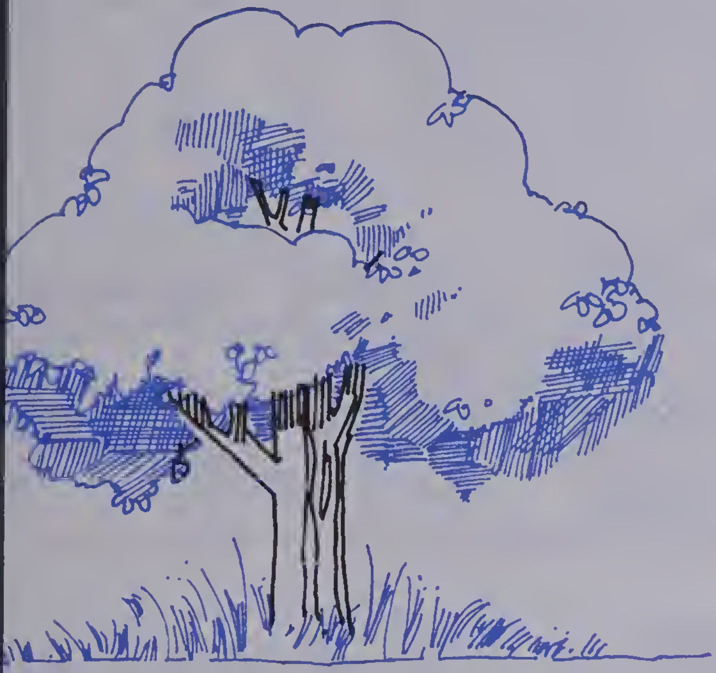
○

lettuce

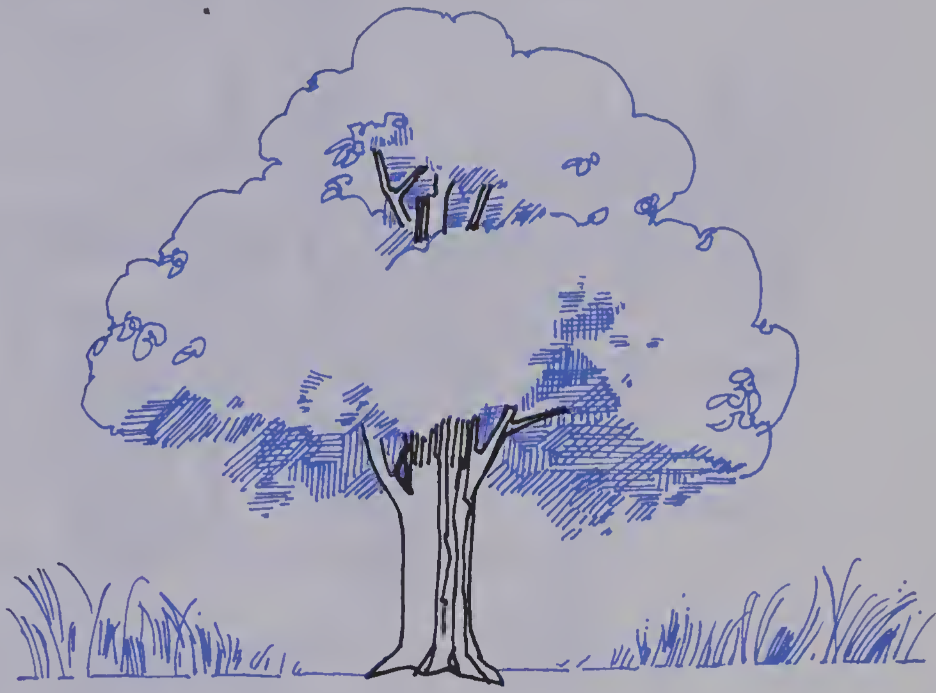


Brain Teaser

Look at the grass in each picture.
What might have caused the differences in growth?



A



B

Record the temperature in each section.
Measure and record the plant heights
after one week. Measure again after two weeks.

TEMPERATURE OF SECTIONS

										°C

PLANT HEIGHTS AFTER ONE WEEK

lettuce											mm
tomato											mm

PLANT HEIGHTS AFTER TWO WEEKS

lettuce											mm
tomato											mm

What temperature was too high for the lettuce plants? ______ °C

What temperature was too high for the tomato plants? ______ °C

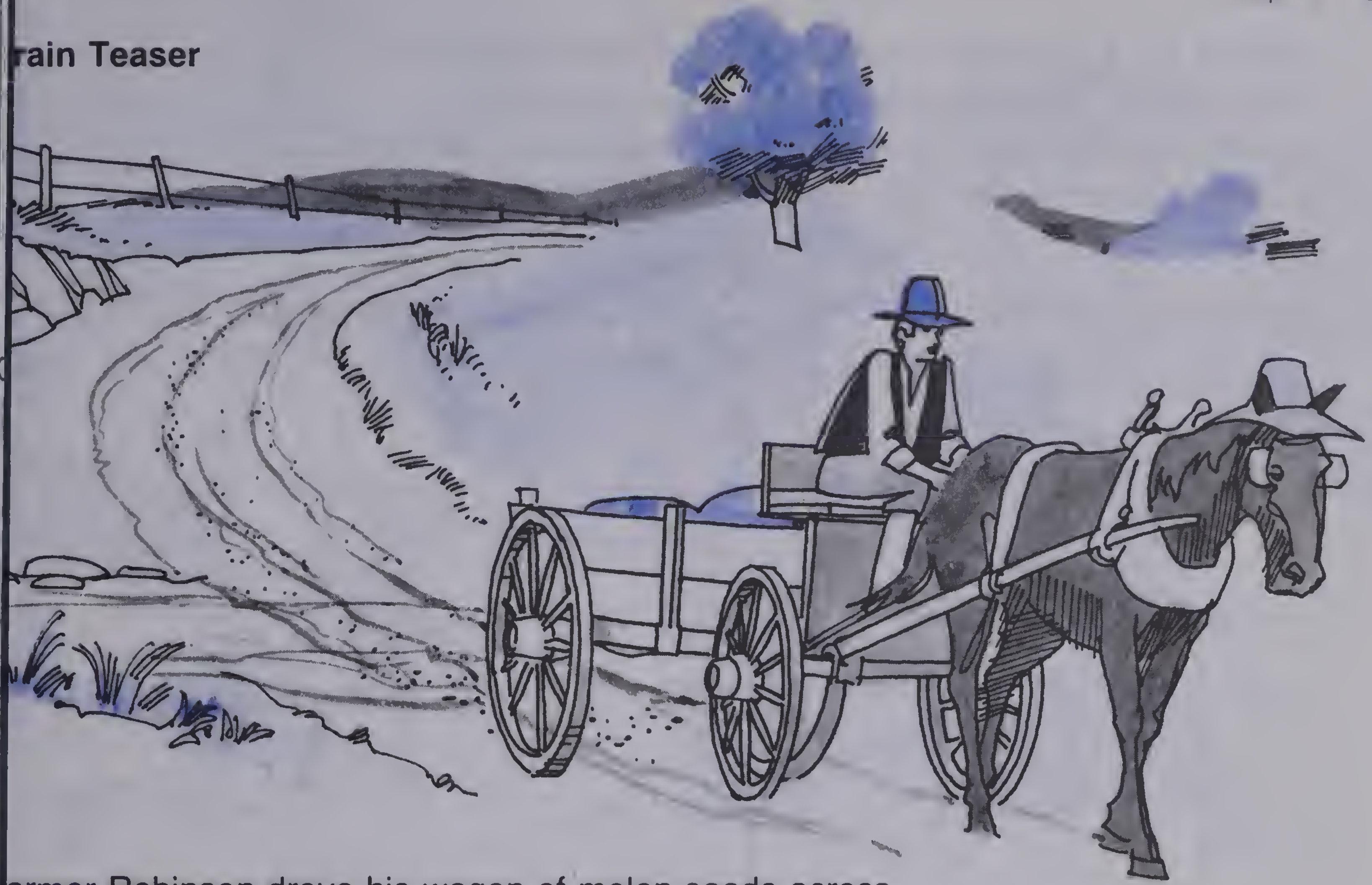
Were any temperatures too low for the lettuce plants? ______

Were any temperatures too low for the tomato plants? ______

What temperature is best for lettuce plants? ______ °C

What temperature is best for tomato plants? ______ °C

rain Teaser



armer Robinson drove his wagon of melon seeds across stream. He stopped on the other side. Then he found hat seeds had leaked out of the bags along the way.

ark X's where melon plants might grow.

hy do you think they would grow there?

You just got a job putting in a lawn for a woman. She doesn't know whether her soil needs fertilizer or not. She doesn't want to buy any if she doesn't have to. Design an experiment to find out if fertilizer will help the grass grow better in her yard.

MATERIALS NEEDED

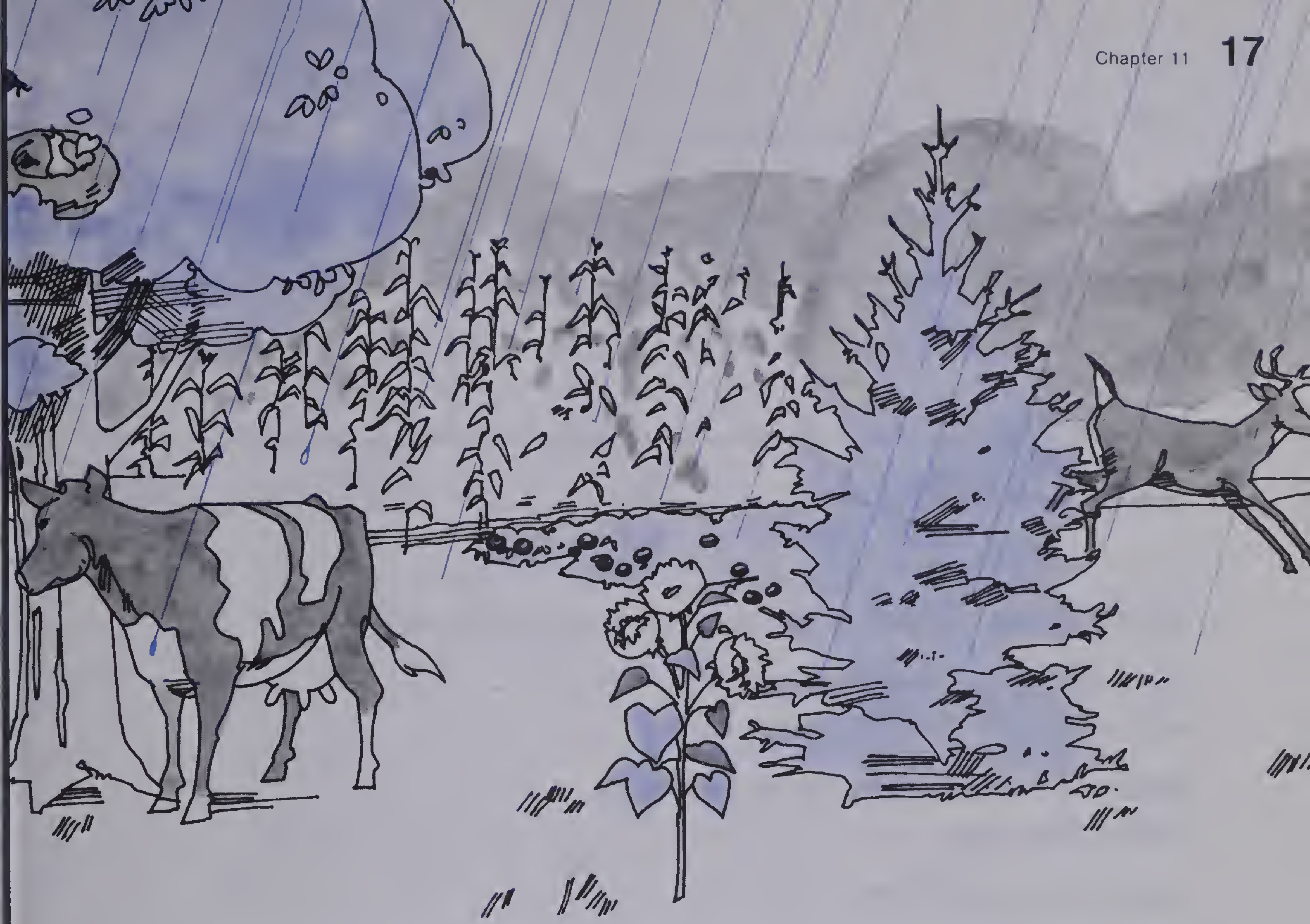
DRAWING OF EXPERIMENT

What soil would you use? ________________

What seed would you use? ________________

How much water would you use for each test area of grass? ________________

Where would you place the experiment? ________________



the picture above are many organisms. The places
here they live are also shown.

ame one or more of the animals. ____________________

ame one or more of the plants. ____________________

ame the habitat of the young bird. ____________________

ame one or more of the environmental factors you can see. ____________________

____

ame the organisms. 1. ____________ 2. ____________ 3. ____________

escribe the environment. ____________________

Date ____________________

This is a diagram of your temperature trough.

______°C ______°C ______°C ______°C ______°C ______°C

Record the temperature under each section of the trough.

Make dots to show where your team's isopods started.

Make X's to show where the isopods were five minutes later.

Look at the class chart.

What do you think is the optimum range of temperature for isopods?

____

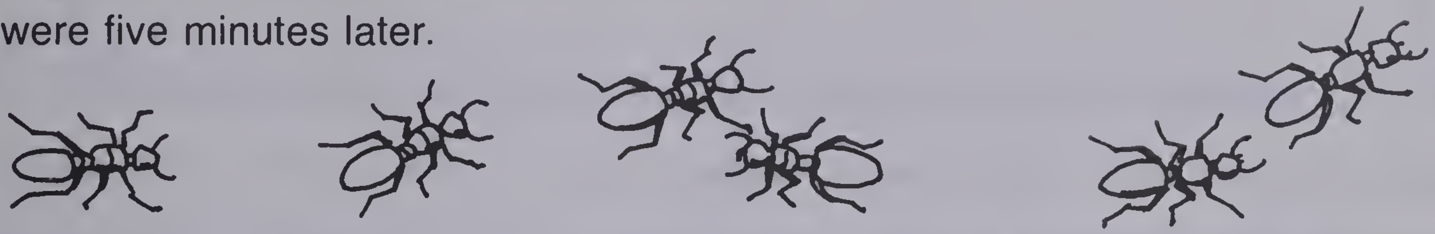
Look at the drawing below. Draw isopods where you would expect to find them.

rain Teaser

r. Johnson's class used temperature troughs like yours.

ach team tested ten ants.

he diagrams below show where each team's
nts were five minutes later.



	X	X X X X X	X X X X			Team A
2°C	7°C	21°C	27°C	35°C	46°C	

	X X X X	X X X	X X X			Team B
4°C	16°C	18°C	27°C	38°C	49°C	

	X X X X	X X X X	X		X	Team C
2°C	10°C	16°C	24°C	35°C	43°C	

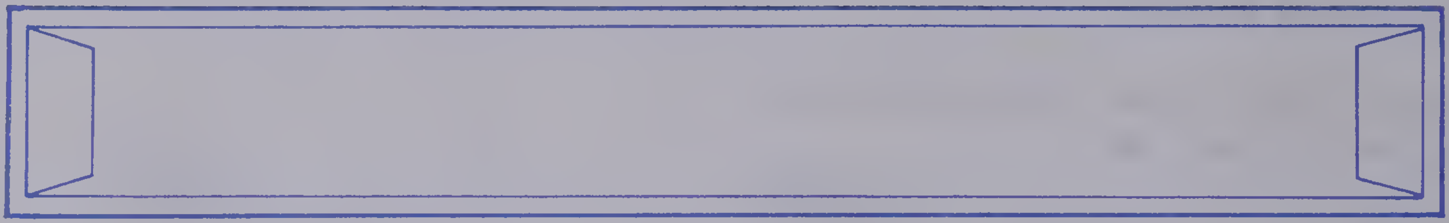
X X X	X X X X X	X		X		Team D
10°C	13°C	21°C	29°C	38°C	49°C	

X		X X X X X X	X X X			Team E
1°C	4°C	18°C	24°C	35°C	46°C	

hat do you think is the optimum temperature for ants?

Date ______________________

Divide the diagram into sections. It should match your team's trough.



Record the amount of light for each section.

Make dots on the diagram to show where your team's isopods started.

Make X's on the diagram to show where the isopods are five minutes later.

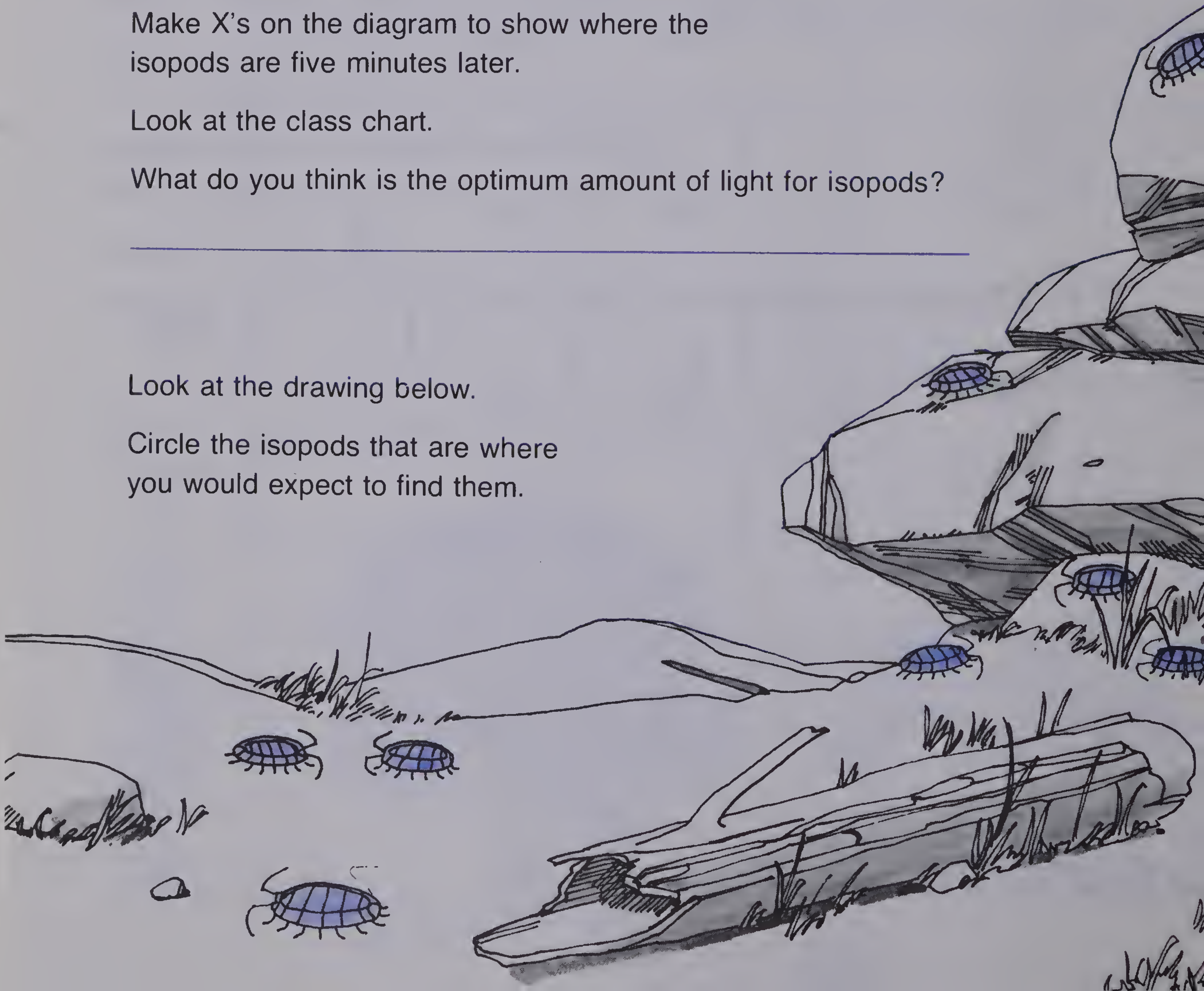
Look at the class chart.

What do you think is the optimum amount of light for isopods?

____

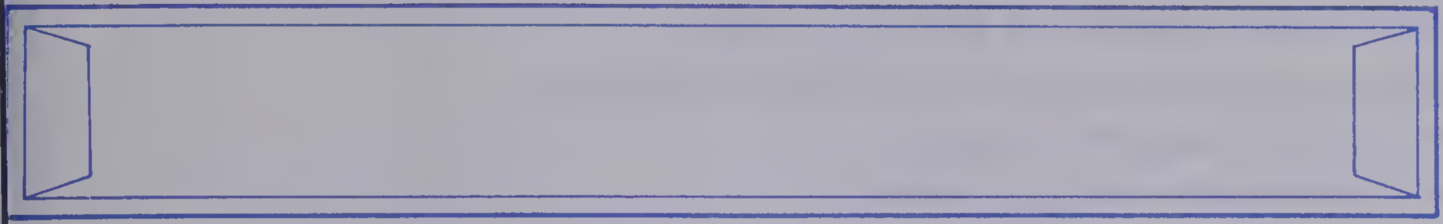
Look at the drawing below.

Circle the isopods that are where you would expect to find them.



ate

ivide the diagram into sections. It should match your team's trough insert.



ecord the amount of moisture in each section.

ake dots on the diagram to show where your eam's isopods started.

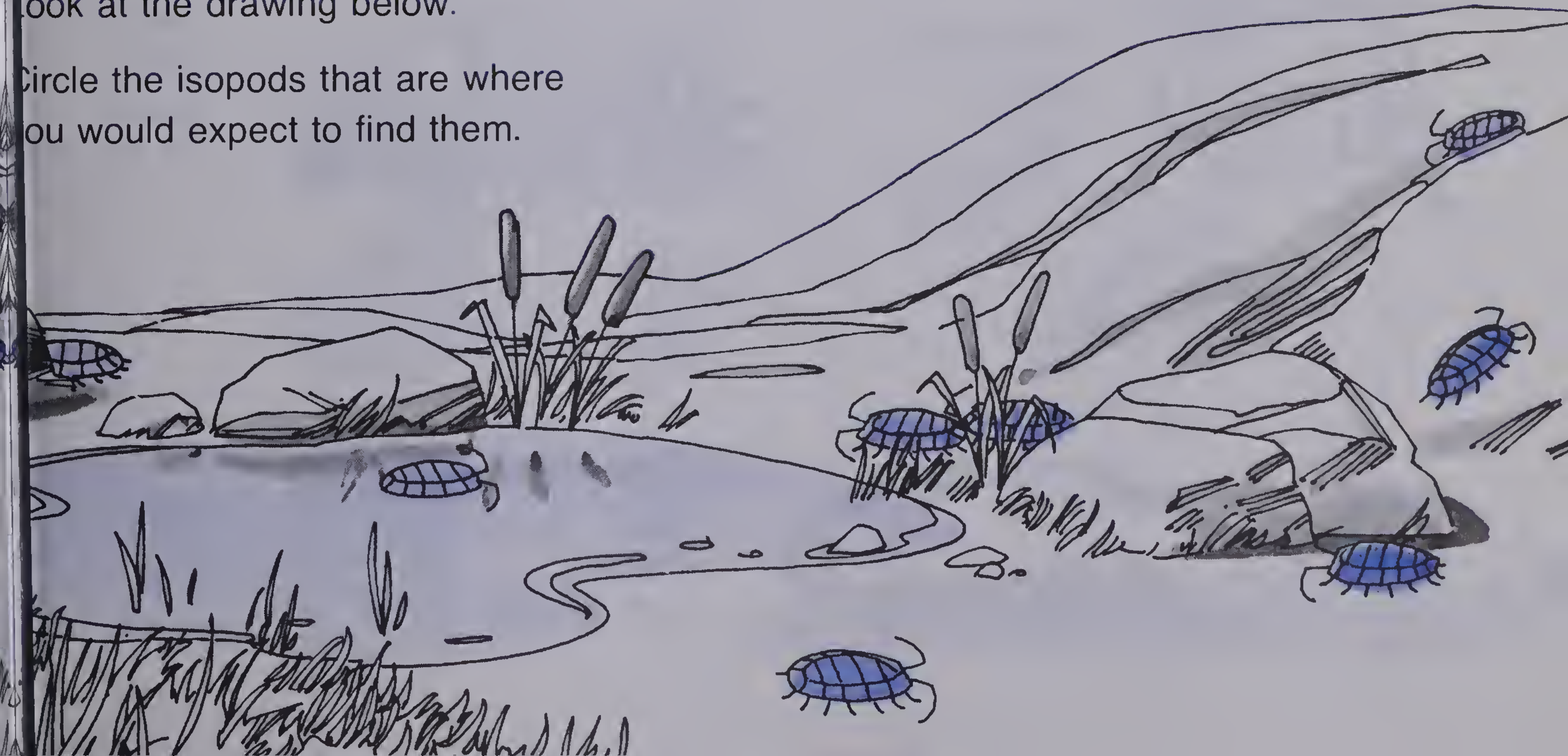
ake X's on the diagram to show where the isopods re ten minutes later.

ook at the class chart.

hat do you think is the optimum amount of moisture for isopods?

ook at the drawing below.

ircle the isopods that are where ou would expect to find them.



Brain Teaser

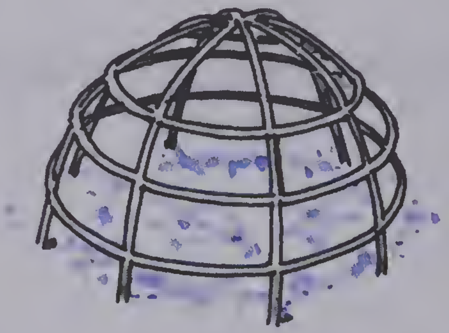
Ms. Jones's class wanted more isopods for their tests. They looked for isopods in different places in their school yard. They recorded the amounts of water, temperature, and light in each place. Mark an X wherever you think the students found isopods.
Use your class data to help you decide.

Under faucet

Bright
Wet
−3° to −1°C

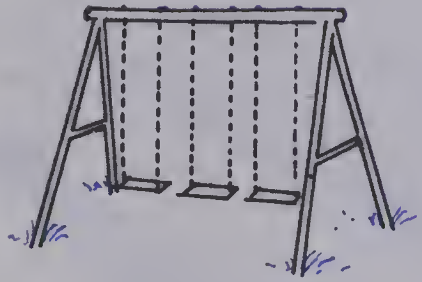
Under slide

Dark
Dry
−4° to 0°C



Under bark chips

Shade
Damp
−10° to −7°C



Under swing

Bright
Dry
−2° to 3°C

In grass

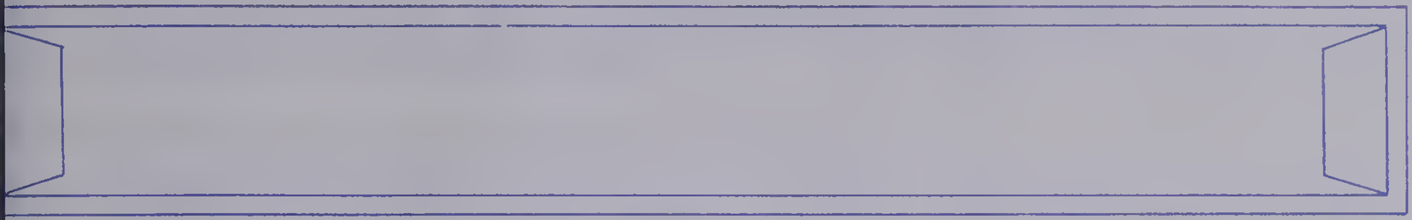
Shade
Damp
−9° to −6°C

Under bushes

Dark
Damp
−12° to −8°C

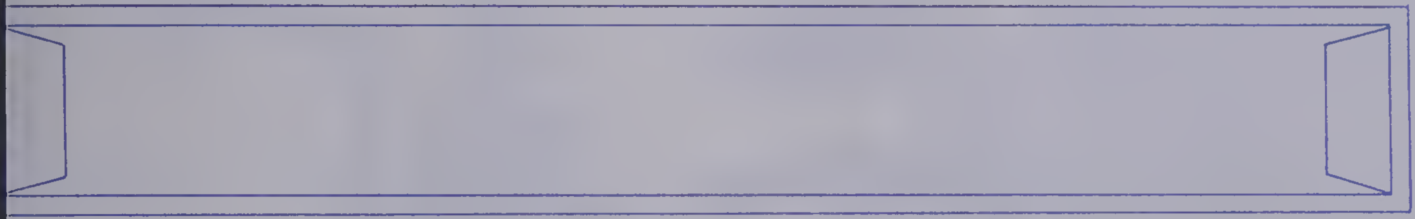
ate ______________________

ecord the temperatures of the trough sections.



__________ °C __________ °C __________ °C __________ °C

fter each test, place an X where you find your hermit crab.



rain Teaser

he summer temperature ranges for five different
aces in the world are listed below.

ut an X on each place where you think hermit crabs could live.

se the data to help you decide.

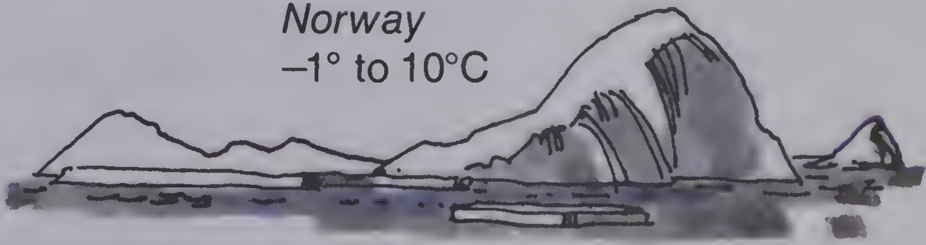
Egypt
35° to 46°C

Colombia
21° to 29°C

Greenland
–6° to 4°C

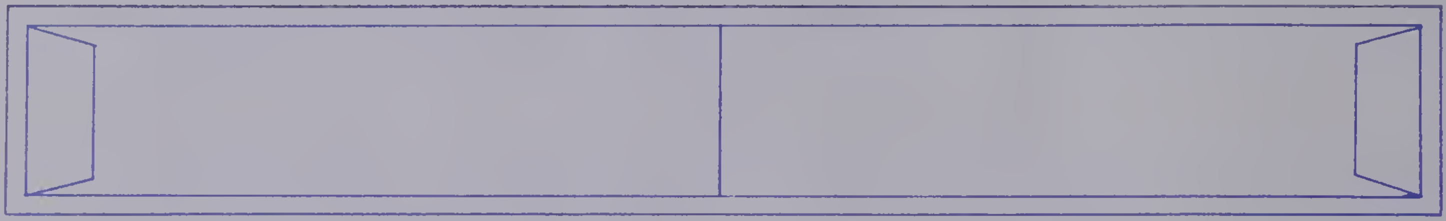
Texas
32° to 40°C

Norway
–1° to 10°C



Date ____________________________

Record the amount of moisture at each end of the trough.



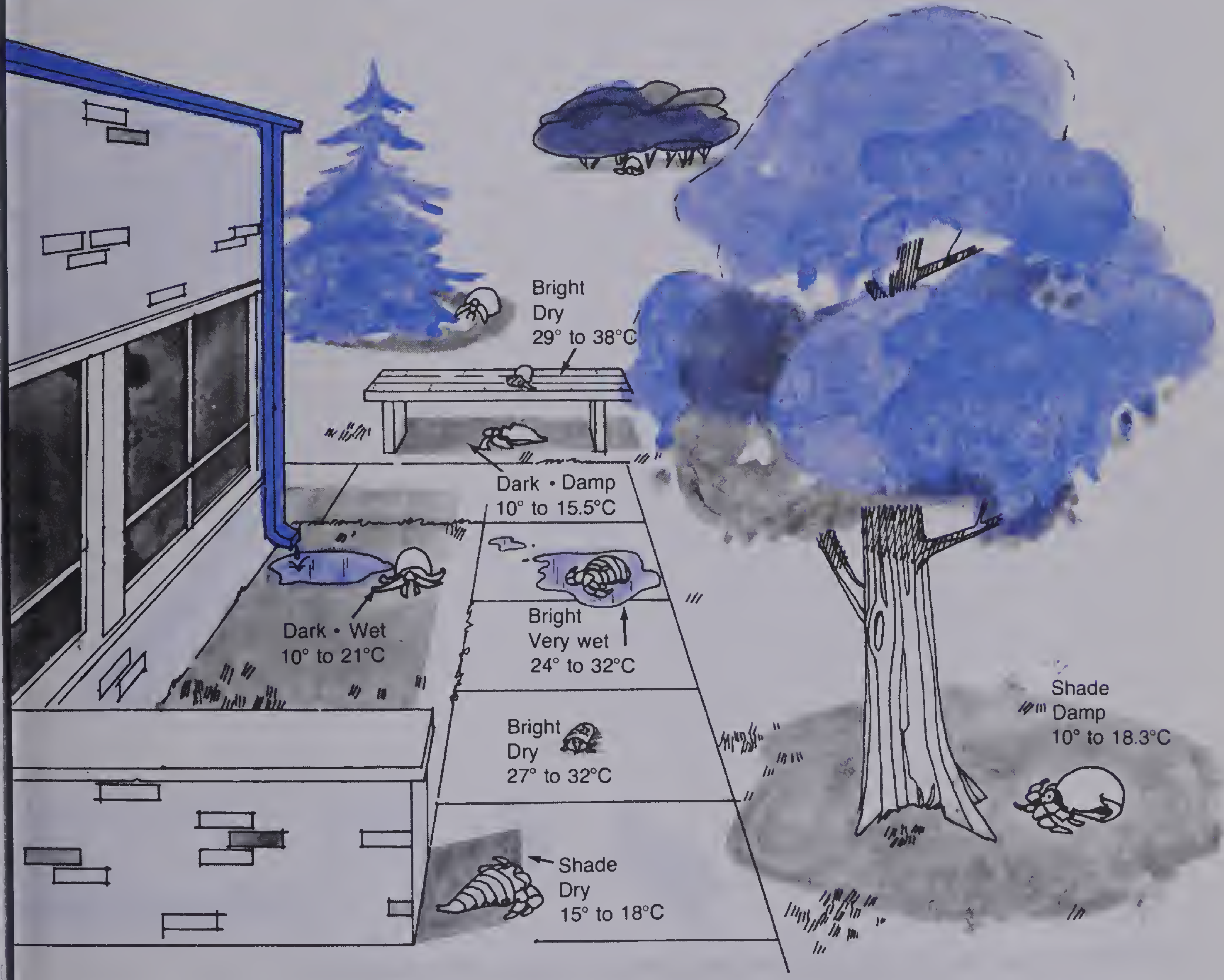
After each test, place an X where you find your hermit crab.

rain Teaser

he boys and girls in Ms. Smith's class put their hermit crabs different places in the school yard.

ircle the animals that you think were placed favorable environments.

se your class data to help you decide.



ow do you think the hermit crabs placed in unfavorable nvironments will respond?

ready to discuss your ideas.

Date ____________________

How can you find the optimum amount of light for beetles?

Draw or describe your experiment.

Look at the class data.

What do you think is the optimum amount of light for beetles?

____

____

ate ______________________________

ow can you find the optimum range of temperature for beetles?

raw or describe your experiment.

ok at the class data.

hat do you think is the optimum range of temperature for beetles?

____

____

Date ______________________

How can you find the optimum amount of moisture for beetles?

Draw or describe your experiment.

How did the beetles respond?

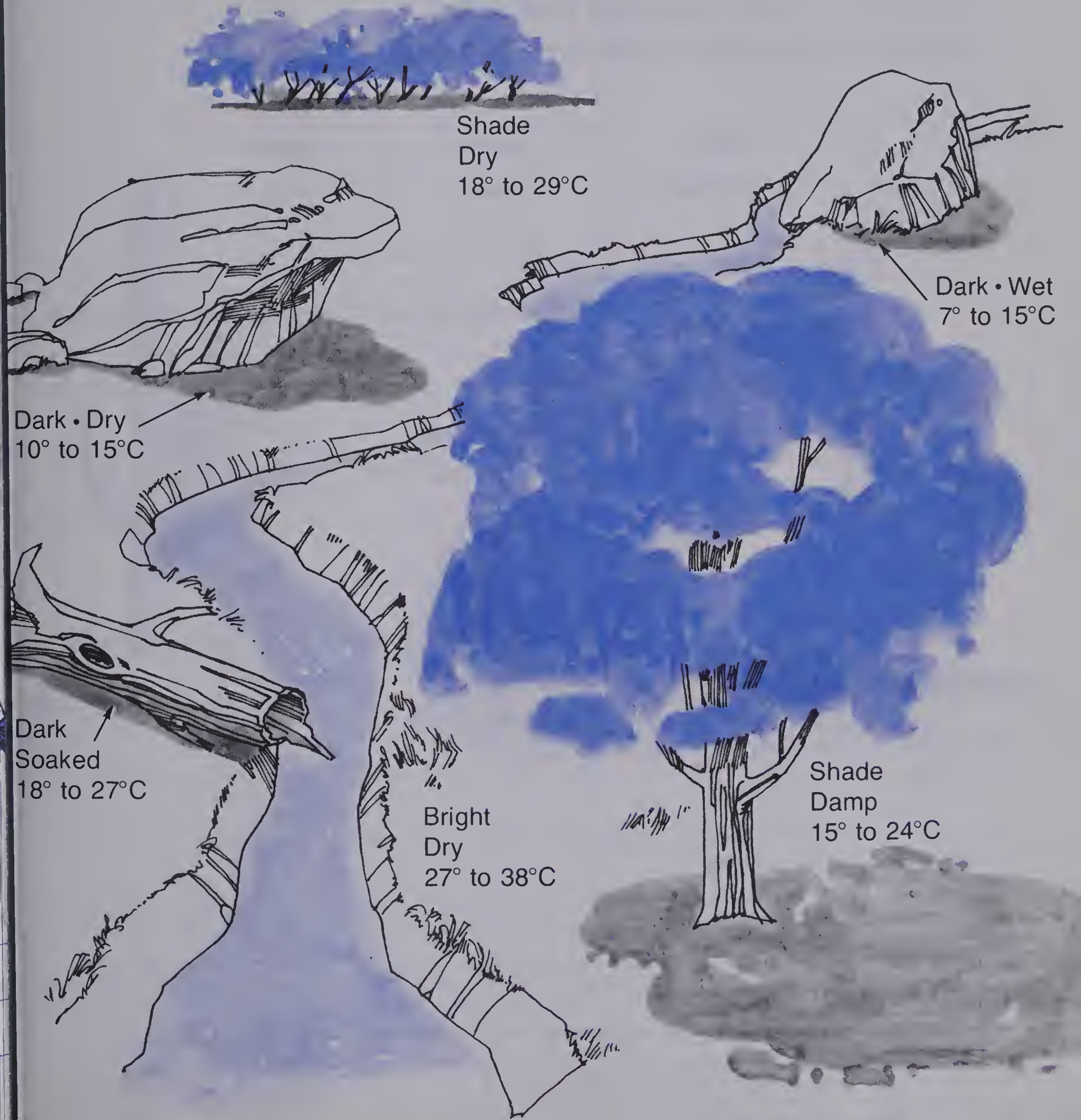
____

____

____

rain Teaser

raw beetles in the places where you think they could survive best.



Brain Teaser

The organisms listed below were placed on a sand dune in the desert. The temperature there is 52°C. In the shade of the cactus plants, it is about 35°C. There is no rain at this time of year, but there is a small water hole. Circle the names of the organisms you think could survive.

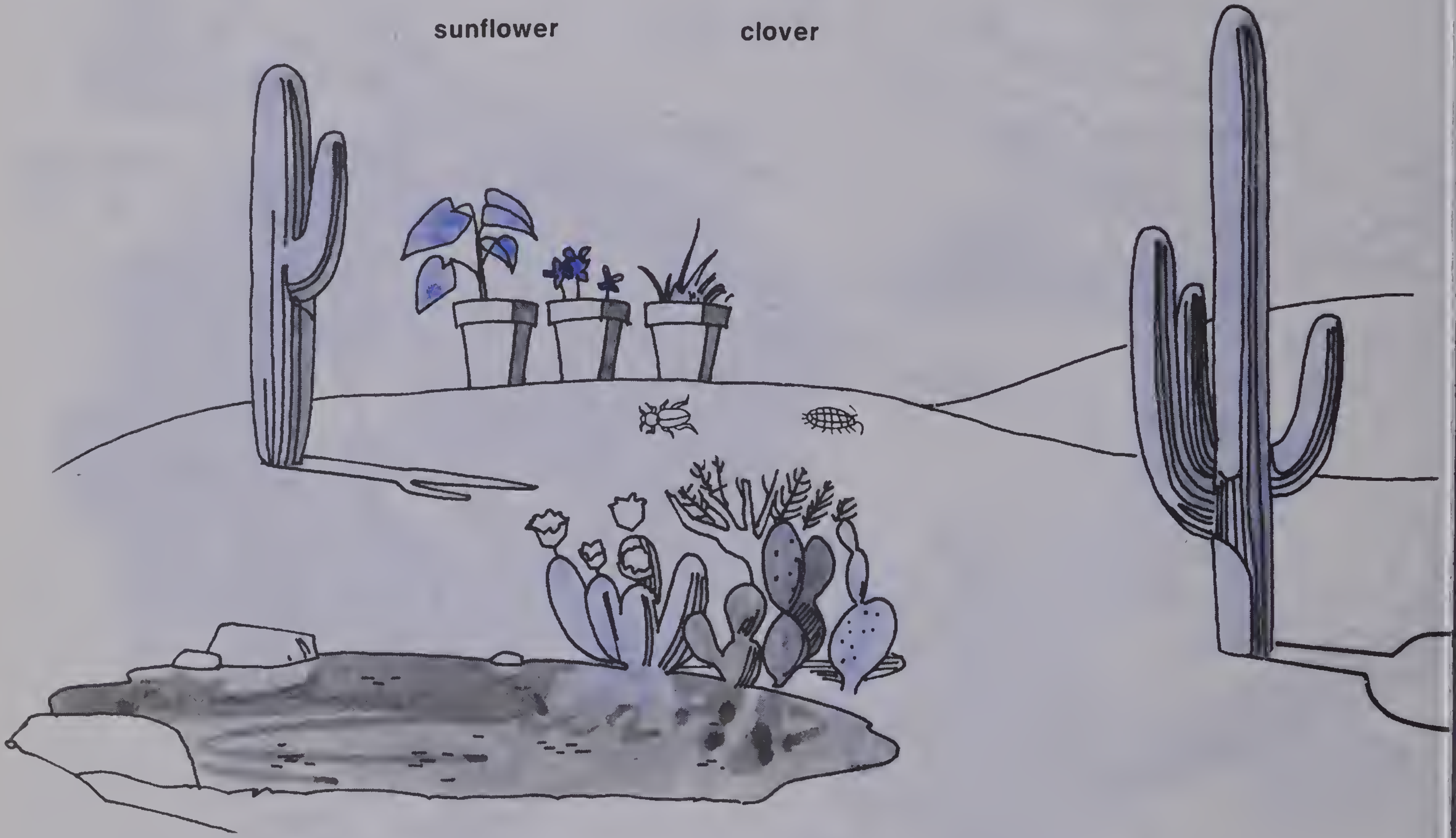
beetle

sunflower

isopod

clover

grass



How would they survive?

ate ______________________

hich organisms will you put in your terrarium?

ist the environmental factors in your terrarium.

ow will you provide an optimum range for each factor?

Make a list of environmental factors humans need to survive.

List the organisms or places from which these factors come.

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